



SEQUENCE LISTING

<110> CHAPMAN, KENT D.
AUSTIN-BROWN, SHEA

<120> METHODS FOR EXTENDING THE FRESHNESS OF CUT FLOWERS, ORNAMENTAL TREES
AND PLANT CUTTINGS

<130> 4380.000400

<140> 09/702,374

<141> 2000-10-30

<150> 60/162,178

<151> 1999-10-28

<160> 15

<170> PatentIn version 3.0

<210> 1

<211> 1173

<212> DNA

<213> Nicotiana tabacum

<400> 1

```
gggaagtgc tggaggacat gttcaatgca ataaatcagg ctgcgcggtt gatttacatt      60
acaggatggt cagtgtacca cctagttaca cttgttaggg ataattggaaa agctgaggaa     120
agcatgttag gggaaattct caagaggaaa tcccaagaag gtgtgagagt actgcttctc     180
atatgggatg atcctacctc ttgaagagc atcttgggat acaaaagtga aggaatcatg     240
ggaactagtg atgaagaaac tcgtcgctat tttaagcatt cttcagtgc cgtgctactt     300
tgtccccgtt ctgctggaaa agggcacagc tgggtcaaaa aacaggaaac tggacaataa     360
tacacacatc atcagaaaac tgtaatagtg gatgtggatg ctggtaatta ccagagaaaag     420
attatcgctt tcgttgggtg ccttgatttg tgcaaagggc gttatgatac tccacaacac     480
cctatcttta aaacattgca aaatgtgcac aaagatgact atcatcagcc taactacacg     540
ggccctacta ccggttgtcc tagagaacct tggcatgatt tacatagtcg gatcgagggg     600
cctgctgcat atgatgtcct aactaacttc gaggagcgcg ggttgaaggc ttcaaagcgc     660
catggacttc aaaagatgaa agcttcacaa gatgatgcat tactccaact tgacaggatt     720
tccgacatat taaaaatagc tgatgtccct tgcctaggag aagatgatgc agatacgtgg     780
cacgtgcaga ttttccggtc gattgactcc aactctgtta aaggtttccc caaagatccc     840
aaagaagcca ctaacaagaa tctagtttgt ggcaagaatg tgctgataga tatgagcata     900
cactactgct atgtaaaggc aatccgagct gcccaacatt tcatctacat tgagaaccag     960
tacttcctag ggtcctcata caattggaat aactaccaag atttaggtgc aaataacttg    1020
ataccgatgg agattgctct aaaaattgcc aacaaaatac gggcaaatga gaggttttca    1080
```

gtatatataa ttgttcttat gtggccagag ggtgttccaa ccagtactgc tactcagaga 1140
ataactttttt ggcaacacaa aaccatagag atg 1173

<210> 2
<211> 391
<212> PRT
<213> Nicotiana tabacum

<400> 2

Gly	Lys	Cys	Trp	Glu	Asp	Met	Phe	Asn	Ala	Ile	Asn	Gln	Ala	Arg	Arg	1	5	10	15
Leu	Ile	Tyr	Ile	Thr	Gly	Trp	Ser	Val	Tyr	His	Leu	Val	Thr	Leu	Val	20	25	30	
Arg	Asp	Asn	Gly	Lys	Ala	Glu	Glu	Ser	Met	Leu	Gly	Glu	Ile	Leu	Lys	35	40	45	
Arg	Lys	Ser	Gln	Glu	Gly	Val	Arg	Val	Leu	Leu	Leu	Ile	Trp	Asp	Asp	50	55	60	
Pro	Thr	Ser	Ser	Lys	Ser	Ile	Leu	Gly	Tyr	Lys	Ser	Glu	Gly	Ile	Met	65	70	75	80
Gly	Thr	Ser	Asp	Glu	Glu	Thr	Arg	Arg	Tyr	Phe	Lys	His	Ser	Ser	Val	85	90	95	
His	Val	Leu	Leu	Cys	Pro	Arg	Ser	Ala	Gly	Lys	Gly	His	Ser	Trp	Val	100	105	110	
Lys	Lys	Gln	Glu	Thr	Gly	Thr	Ile	Tyr	Thr	His	His	Gln	Lys	Thr	Val	115	120	125	
Ile	Val	Asp	Val	Asp	Ala	Gly	Asn	Tyr	Gln	Arg	Lys	Ile	Ile	Ala	Phe	130	135	140	
Val	Gly	Gly	Leu	Asp	Leu	Cys	Lys	Gly	Arg	Tyr	Asp	Thr	Pro	Gln	His	145	150	155	160
Pro	Ile	Phe	Lys	Thr	Leu	Gln	Asn	Val	His	Lys	Asp	Asp	Tyr	His	Gln	165	170	175	
Pro	Asn	Tyr	Thr	Gly	Pro	Thr	Thr	Gly	Cys	Pro	Arg	Glu	Pro	Trp	His	180	185	190	
Asp	Leu	His	Ser	Arg	Ile	Glu	Gly	Pro	Ala	Ala	Tyr	Asp	Val	Leu	Thr	195	200	205	
Asn	Phe	Glu	Glu	Arg	Trp	Leu	Lys	Ala	Ser	Lys	Arg	His	Gly	Leu	Gln	210	215	220	
Lys	Met	Lys	Ala	Ser	Gln	Asp	Asp	Ala	Leu	Leu	Gln	Leu	Asp	Arg	Ile	225	230	235	240
Ser	Asp	Ile	Leu	Lys	Ile	Ala	Asp	Val	Pro	Cys	Leu	Gly	Glu	Asp	Asp	245	250	255	

Ala Asp Thr Trp His Val Gln Ile Phe Arg Ser Ile Asp Ser Asn Ser
260 265 270

Val Lys Gly Phe Pro Lys Asp Pro Lys Glu Ala Thr Asn Lys Asn Leu
275 280 285

Val Cys Gly Lys Asn Val Leu Ile Asp Met Ser Ile His Thr Ala Tyr
290 295 300

Val Lys Ala Ile Arg Ala Ala Gln His Phe Ile Tyr Ile Glu Asn Gln
305 310 315 320

Tyr Phe Leu Gly Ser Ser Tyr Asn Trp Asn Asn Tyr Gln Asp Leu Gly
325 330 335

Ala Asn Asn Leu Ile Pro Met Glu Ile Ala Leu Lys Ile Ala Asn Lys
340 345 350

Ile Arg Ala Asn Glu Arg Phe Ser Val Tyr Ile Ile Val Pro Met Trp
355 360 365

Pro Glu Gly Val Pro Thr Ser Thr Ala Thr Gln Arg Ile Leu Phe Thr
370 375 380

Gln His Lys Thr Ile Glu Met
385 390

<210> 3
<211> 10
<212> PRT
<213> Nicotiana tabacum

<400> 3

Gly Gly Gln His Lys Thr Ile Glu Met Met
1 5 10

<210> 4
<211> 26
<212> DNA
<213> Nicotiana tabacum

<220>
<221> misc_feature
<222> (13)..(13)
<223> N = ANY NUCLEOTIDE

<400> 4
catcatytc d atngtyttrt gytgcc

26

<210> 5
<211> 9
<212> PRT
<213> Nicotiana tabacum

<400> 5

Ile Tyr Thr His His Glu Lys Ala Cys
1 5

<210> 6
<211> 23
<212> DNA
<213> Nicotiana tabacum

<220>
<221> misc_feature
<222> (9)..(9)
<223> N = ANY NUCLEOTIDE

<400> 6
athtayacnc aycaygaraa rac

23

<210> 7
<211> 11
<212> PRT
<213> Nicotiana tabacum

<400> 7

Cys Asn Ile Tyr Thr His His Glu Lys Ala Cys
1 5 10

<210> 8
<211> 25
<212> DNA
<213> Nicotiana tabacum

<220>
<221> misc_feature
<222> (15)..(15)
<223> N = ANY NUCLEOTIDE

<220>
<221> misc_feature
<222> (24)..(24)
<223> N = ANY NUCLEOTIDE

<400> 8
gtyttytcrt grtgngtrta datng

25

<210> 9
<211> 8
<212> PRT
<213> Nicotiana tabacum

<400> 9

Glu Cys Trp Phe Trp Cys Gly Gly
1 5

<210> 10
<211> 20
<212> DNA
<213> Nicotiana tabacum

<400> 10
gartgytggt tytggtgygg

20

<210> 11
<211> 8
<212> PRT
<213> Nicotiana tabacum

<400> 11

His Gly Lys Cys Trp Glu Asp Met
1 5

<210> 12
<211> 24
<212> DNA
<213> Nicotiana tabacum

<220>
<221> misc_feature
<222> (6)..(6)
<223> N = C, G, A or T

<400> 12
caygngaart gytgggarga yatg

24

<210> 13
<211> 9
<212> PRT
<213> Nicotiana tabacum

<400> 13

Glu Glu Pro Glu Asn Met Glu Cys Gly
1 5

<210> 14
<211> 25
<212> DNA
<213> Nicotiana tabacum

<220>
<221> misc_feature
<222> (17)..(17)
<223> N = C, G, A or T

<400> 14
crcaytccat rttytcnggy tcytc

25

<210> 15
<211> 8
<212> PRT
<213> Nicotiana tabacum

<220>

<221> misc_feature
<222> (2)..(2)
<223> X = ANY AMINO ACID

<220>
<221> misc_feature
<222> (4)..(7)
<223> X = ANY AMINO ACID

<400> 15

His Xaa Lys Xaa Xaa Xaa Xaa Asp
1 5